

Temporary Presyncope Due To Obstruction Of The Posterior Descending Artery

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Introduction

It is uncommon for posterior descending artery (PDA) obstruction to cause transient symptomatic bradycardia. Lin and Cheng [1] described a patient who first presented with acute-onset dizziness caused by total blockage of the left circumflex (LCx) artery without objective signs of myocardial infarction. In this example, a patient experienced brief presyncope caused by a virtually occlusive PDA without any signs of cardiac ischemia. For quick and successful coronary revascularization, it is essential to identify this dangerous condition early and accurately.

Case Presentation: A 64-year-old Caucasian guy with five presyncopal episodes in the previous 24 hours arrived at our medical institution. He had a history of uncontrolled hypertension, hyperlipidemia, and posttraumatic stress disorder. Over the previous three years, the patient had occasionally encountered similar occurrences, but recently they had increased in frequency and intensity.

He described these episodes as dizziness and lightheadedness with brief moments of balance trouble that required him to sit down for one to two minutes at a time. The patient denied experiencing any kind of loss of consciousness, palpitations, or chest pain. The vital signs showed 158/72 mmHg for the blood pressure, 51 for the pulse, and 16 for the respiration rate. The serial cardiac enzymes showed no noteworthy changes. A few instances of asymptomatic sinus bradycardia that dropped as low as 41 beats per minute were detected on telemetry.

The carotid ultrasound, brain MRI, computed tomography of the head, and two-dimensional echocardiography were all essentially normal. For sinus bradycardia, a cardiology consultation was sought, and the patient had a technetium (99mTc) sestamibi treadmill stress test. The electrocardiogram during the stress test revealed a left bundle branch block (LBBB) with many pre-ventricular contractions (PVCs).

There was no chest pain in the patient or presyncope throughout the

examination. Multiple stenoses (70-90%) in the left anterior descending artery (LAD), entire blockage of the nondominant LCx, 70% stenosis in the distal right coronary artery (RCA), and 90% stenosis in the PDA were found during a subsequent cardiac catheterization. The best course of action was balloon angioplasty with stent implantation because the patient's illness largely affected the apex of the vessel.

In the LAD, five drug-eluting stents were effectively implanted. The patient was sent to the intensive care unit for close observation because the patient's heart rate was still very close to 40 beats per minute. He underwent a second catheterization when two stents were inserted, one in the PDA and one in the distal RCA, after two days passed with no change. Following His bradycardia was treated during the second surgery, and his heart rate remained in the 70s. He remains asymptomatic five months after the follow-up visit.

Discussion

We describe a rare instance of severe coronary artery disease (CAD) that lacks angina or the first telltale signs of myocardial infarction. A similar case where the symptoms disappeared following LCx angioplasty has also been documented [1].

After the PDA stent was implanted, our patient's symptoms disappeared. 20% of patients with symptomatic bradyarrhythmias also have coexisting CAD, according to one study [2]. Sinus bradyarrhythmias can result from compromised blood flow to the sinus and atrioventricular nodes, which receive blood primarily from the RCA and secondarily from the LCx [3]. We believed that this patient's transitory presyncope was caused by due to the bradyarrhythmias' impact on unstable hemodynamics. Only PVCs and an LBBB were seen during the stress test on our patient, who was completely asymptomatic.

Given the association between bradycardia and the development of collateral arteries in patients with obstructive CAD, coronary collateral vessels may be to blame for this. Due to angiography's inability to detect collaterals smaller than 50 micrometres in diameter, we were unable to corroborate this. Patients with transient presyncope and "asymptomatic" bradycardia should have CAD on the differential diagnosis list because failing to make this diagnosis could have negative effects.

References :

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